

## PATENT ABSTRACTS OF JAPAN

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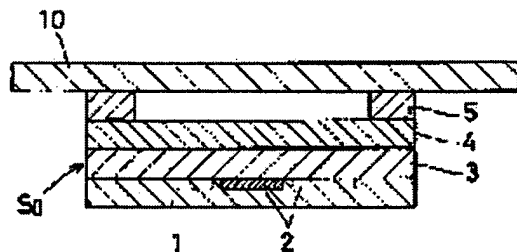
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### (54) SEAL FOR DISCRIMINATION OF WATER IMMERSION

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a seal for discrimination of water immersion so as to prevent sticking errors.

SOLUTION: A printing part 2 made of water-soluble ink is formed on one surface of a sheet 1 having water absorbing property. A pressure-sensitive adhesive layer 3 is formed on one surface of the sheet 1, and a partial pressure-sensitive adhesive layer 5 to be adhered to the objective body is formed in the peripheral part of the surface of a transparent film 4 adhered to the pressure-sensitive adhesive layer 3. The color of the partial pressure-sensitive adhesive layer 5 is colored by the adhesive so that the presence of the partial pressure-sensitive adhesive layer 5, the position where the layer 5 is formed, and the formed state of the layer 5 can be visually checked to prevent sticking errors of the seal for discrimination of water immersion.



LEGAL STATUS - Not available

[Claim(s)]

[Claim 1]

The printing section in water-soluble coloring ink is prepared in one side of the piece of a sheet which has absorptivity. The transparent piece of a film is pasted up on the binder layer prepared in one side of the above-mentioned piece of a sheet. The flood discernment seal characterized by the aforementioned partial binder layer consisting of a colored binder in the flood discernment seal which distinguishes whether it stuck on the surface periphery section of the piece of a film, the partial binder layer for adhesion to an object was formed, and it was flooded by the existence of diffusion of the coloring ink of the aforementioned printing section.

[Claim 2] The printing section in water-soluble coloring ink is prepared in the rear face of the piece of a sheet which has absorptivity. The piece of a bright film is pasted up on the forming face side of the printing section through a binder layer. The flood discernment seal characterized by the aforementioned partial binder layer consisting of a colored binder in the flood discernment seal which distinguishes whether it stuck on the surface periphery section of the aforementioned sheet side, the partial binder layer for adhesion to an object was prepared, and it was flooded by the existence of diffusion of the coloring ink of the aforementioned printing section.

**[Detailed Description of the Invention]**

[0001]

**[The technical field to which invention belongs]**

This invention relates to the flood discernment seal which can distinguish whether the equipment which misses a function by flood of a portable telephone etc. was flooded.

[0002]

**[Description of the Prior Art]**

As Aperture A is formed in a portable telephone main part or the wall of a cell pack as shown in drawing 5 , and the aperture A is covered to a portable telephone, it is made to attach the flood discernment seal S in it generally.

[0003]

The flood discernment seal S prepares the printing section in water-soluble coloring ink in one side of the piece of a sheet which consists of the good paper of absorptivity, covers the printing section by the transparent piece of a film pasted up on one side of the piece of a sheet, is stuck on the surface periphery of the piece of a film, and forms the partial binder layer for adhesion to an object.

[0004]

In the above-mentioned flood discernment seal S, if flooded, the water-soluble ink of the printing section can be spread and it can distinguish whether it was flooded by diffusion of the water-soluble ink.

[0005]

Therefore, by sticking the above flood discernment seals on the portable telephone main part or the cell pack, a portable telephone is made flooded according to a possessor's carelessness, and the possessor in the case of making it pay repair of failure of the portable telephone which considers the flood as a cause to a maker side, and the trouble by the side of a maker can be prevented beforehand.

[0006]

**[Problem(s) to be Solved by the Invention]**

By the way, in the flood discernment seal known from the former, since the partial binder layer for adhesion to an attachment object is transparent and colorless, it is very difficult to distinguish the

existence and the formation position of a partial binder layer by viewing, and there is a possibility of producing an attachment mistake.

[0007]

Here, since the partial binder layer is prepared in the surface periphery section of the piece of a film, it needs to adopt the method of screen-stenciling as formation of a partial binder layer, and has a possibility of producing a printing mistake at the time of the screen-stencil.

[0008]

Moreover, in formation of the partial binder layer by screen-stencil, there is a possibility of it being necessary to form a flood discernment seal, and a position gap arising between a blanking edge and the material for seal formation in the blanking process, and producing a blanking mistake by blanking by half cutting, after formation of the partial binder layer.

[0009]

In the manufacture process of a flood discernment seal, if the above manufacture mistakes arise, a defective will occur in formation of a partial binder layer. Since it is difficult for a partial binder layer to be transparent at this time, and to distinguish the quality by viewing, there is a possibility that the flood discernment seal which changes from a defective to an attachment object may be stuck.

[0010]

The technical problem of this invention is offering the flood discernment seal which enabled it to prevent an attachment mistake beforehand as was able to distinguish the existence, formation position, and quality of a partial binder layer by viewing.

[0011]

#### **[Means for Solving the Problem]**

In order to solve the above-mentioned technical problem, it sets to this 1st invention. The printing section in water-soluble coloring ink is prepared in one side of the piece of a sheet which has absorptivity. The transparent piece of a film is pasted up on the binder layer prepared in one side of the above-mentioned piece of a sheet. It stuck on the surface periphery section of the piece of a film, the partial binder layer for adhesion to an object was formed, and the composition which formed the aforementioned partial binder layer by the colored binder was adopted in the flood discernment seal which distinguishes whether it was flooded by the existence of diffusion of the coloring ink of the aforementioned printing section.

[0012]

Moreover, in the 2nd invention, the printing section in water-soluble coloring ink is prepared in the rear face of the piece of a sheet which has absorptivity. The piece of a bright film is pasted up on the forming face side of the printing section through a binder layer. It stuck on the surface periphery section of the aforementioned sheet side, the partial binder layer for adhesion to an object was prepared, and the composition which formed the aforementioned partial binder layer by the colored binder was adopted in the flood discernment seal which distinguishes whether it was flooded by the existence of diffusion of the coloring ink of the aforementioned printing section.

[0013]

As mentioned above, by forming the partial binder layer pasted up on an attachment object by the colored binder, the existence, formation part, and quality of the partial binder layer can be easily distinguished by viewing, and the attachment mistake of a flood discernment seal can be prevented beforehand.

[0014]

**[Problem(s) to be Solved by the Invention]**

Hereafter, the form of implementation of this invention is explained based on a drawing. Flood discernment seal S0 applied to this invention as shown in drawing 1. It is supported by separator 10.

[0015]

As shown in drawing 1 and drawing 2, it is the flood discernment seal S0. The printing section 2 is formed in one side of the piece 1 of a sheet, the binder layer 3 is formed in whole one side of the piece 1 of a sheet, the transparent piece 4 of a film is pasted up, it sticks on the surface periphery section of the piece 4 of a film, and the partial binder layer 5 for adhesion to an object is formed.

[0016]

The aforementioned piece 1 of a sheet consists of a white material which has the absorptivity of paper of fine quality etc. The printing section 2 is printed in colored water-soluble ink, such as red. If the piece 1 of a sheet gets wet in water and contains moisture, the water-soluble ink of the printing section 2 diffuses this printing section 2, the piece 1 of a sheet can dye in water-soluble ink, and it can distinguish the existence of flood by color change of the above-mentioned piece 1 of a sheet.

[0017]

The partial binder layer 5 formed in the surface periphery section of the piece 4 of a film is formed of the colored binder containing a colorant. Each example of the formation pattern of drawing 3 (I) or (III) the partial binder layer 5 is shown, and it forms in the whole surface periphery of the piece 4 of a film in drawing 3 (I). Moreover, it has prepared along the opposite side of the lot of the front face of the piece 4 of a film at drawing 3 (II) Reaching (III).

[0018]

The above-mentioned partial binder layer 5 is protected by the adhesion to separator 10. Here, separator 10 can consist of a transparent film and can distinguish now the quality of the partial binder layer 5 from the front face by viewing.

[0019]

Flood discernment seal S0 which consists of the above-mentioned composition. It exfoliates from separator 10 and attachment objects, such as a portable telephone, are pasted through the partial binder layer 5.

[0020]

Since the partial binder layer 5 is colored at this time, the existence and the formation part of the partial binder layer 5 can be distinguished by viewing. Moreover, it can be distinguished easily whether formation of the partial binder layer 5 is poor, and it is the flood discernment seal S0. It can prevent beforehand that a mistake arises in attachment.

[0021]

Drawing 4 shows other operation forms of the flood discernment seal concerning this invention. With this operation form, the printing section 12 in water-soluble coloring ink was formed in the rear face of the piece 11 of a sheet which has the absorptivity of paper of fine quality etc., and the transparent piece 14 of a film is pasted up on the forming face of the printing section 12 through the binder layer 13.

[0022]

Moreover, it stuck on the surface periphery section of the aforementioned piece 11 of a sheet, the partial binder layer 15 for adhesion to an object was formed, the partial binder layer 15 was formed by the colored binder containing a colorant, and the separator 16 which changes from a transparent film to the front face is pasted up.

[0023]

The flood discernment seal which consists of the above-mentioned composition exfoliates from separator 16, and is pasted up on attachment objects, such as a portable telephone, through the partial binder layer 15. In the adhesion state, if an attachment object is flooded with water and the piece 11 of a sheet contains moisture, water-soluble ink is spread, and the piece 11 of a sheet dyes in water-soluble ink, and can distinguish the existence of flood by color change of the above-mentioned piece 11 of a sheet.

[0024]

Also in the form of operation shown in drawing 4, since the partial binder layer 15 formed in the piece 11 of a sheet consists of a colored binder, the existence and the formation part of the partial binder layer 15 can be distinguished by viewing. Moreover, it can be distinguished easily whether formation of the partial binder layer 15 is poor, and it can prevent beforehand that a mistake arises in attachment of a flood discernment seal.

[0025]

#### **[Effect of the Invention]**

As mentioned above, by having formed the partial binder layer formed in the surface periphery section of the transparent piece of a film by the colored binder, in the preceding paragraph story which sticks a flood discernment seal and is pasted up on an object, it can distinguish easily whether the existence of a partial binder layer, a formation part, and formation are poor by viewing, and can prevent beforehand that an attachment mistake arises in invention according to claim 1.

[0026] Moreover, in invention according to claim 2, it can prevent beforehand that the attachment mistake of a flood discernment seal arises by having formed the partial binder layer prepared in the surface periphery section of the piece of a sheet in the colored binder layer.

## DESCRIPTION OF DRAWINGS

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### **[Brief Description of the Drawings]**

[Drawing 1] The cross section of the flood discernment seal concerning this invention

[Drawing 2] The flood discernment seal shown in drawing 1 is a notch perspective diagram a part.

[Drawing 3] (I) -- or (III) the plan showing each example of the formation pattern of a partial binder layer

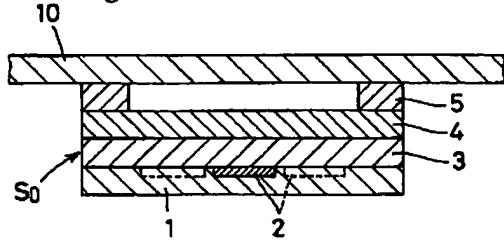
[Drawing 4] The cross section showing other operation gestalten of the flood discernment seal concerning this invention

[Drawing 5] The cross section showing the attachment state of a flood discernment seal

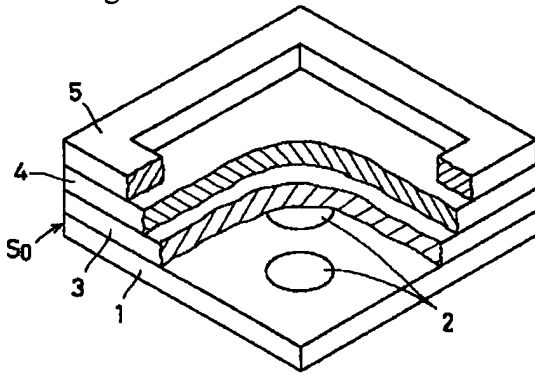
### **[Description of Notations]**

- 1 Piece of Sheet
- 2 Printing Section
- 3 Binder Layer
- 4 Piece of Film
- 5 Partial Binder Layer
- 11 Piece of Sheet
- 12 Printing Section
- 13 Binder Layer
- 14 Piece of Film
- 15 Partial Binder Layer

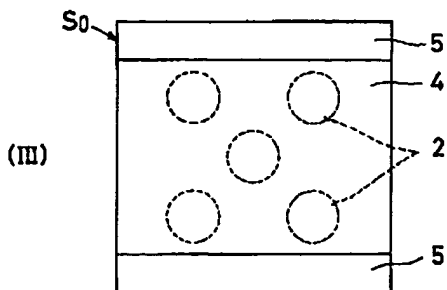
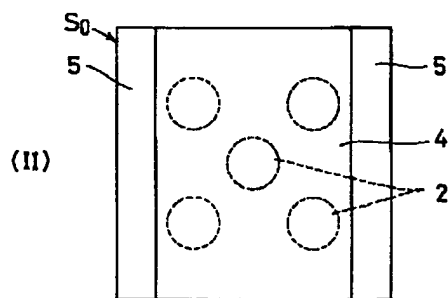
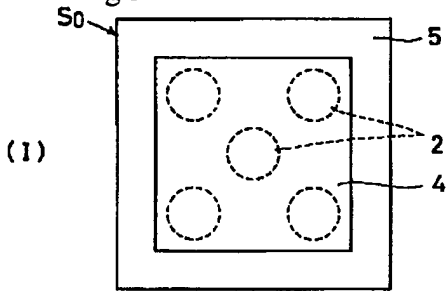
Drawing 1



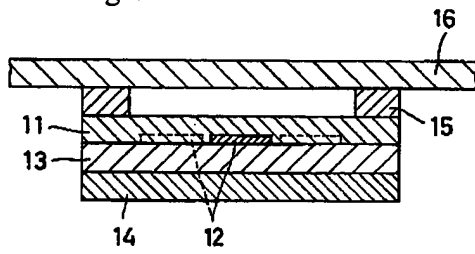
Drawing 2



Drawing 3



Drawing 4



Drawing 5

